



ForTii® JTX2

DSM Engineering Plastics - Polyphthalamide

Tuesday, January 21, 2020

General Information

Product Description

30% Glass Reinforced, PA4T, for E&E applications

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Uses	• Electrical/Electronic Applications		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PPA-GF30		

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.43	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	1.3	--	%	
Flow	0.40	--	%	
Water Absorption				ISO 62
Equilibrium, 23°C, 50% RH	2.0	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				ISO 527-2
--	11000	11000	MPa	
80°C	10500	--	MPa	
120°C	7500	--	MPa	
160°C	4500	--	MPa	
200°C	4000	--	MPa	
Tensile Stress				ISO 527-2
Break	200	180	MPa	
Break, 80°C	180	--	MPa	
Break, 120°C	135	--	MPa	
Break, 160°C	90.0	--	MPa	
Break, 200°C	75.0	--	MPa	
Tensile Strain				ISO 527-2
Break	2.1	2.0	%	
Break, 80°C	4.0	--	%	
Break, 120°C	3.6	--	%	
Break, 160°C	7.0	--	%	
Break, 200°C	8.0	--	%	
Flexural Modulus				ISO 178
--	10500	--	MPa	
160°C	5000	--	MPa	
200°C	4000	--	MPa	
Flexural Stress	315	--	MPa	ISO 178

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Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength 23°C	10	10	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength 23°C	60	60	kJ/m ²	ISO 179/1eU
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 1.8 MPa, Unannealed	305	--	°C	ISO 75-2/A
Melting Temperature ²	325	--	°C	ISO 11357-3
CLTE - Flow	3.3E-5	--	cm/cm/°C	ASTM D696
CLTE - Transverse	4.0E-5	--	cm/cm/°C	ASTM D696
Thermal Index - 5000 hr	177	--	°C	IEC 60216
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	> 1.0E+15	> 1.0E+15	ohms-cm	IEC 60093
Electric Strength	43	40	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	5.00	5.00		
1 MHz	4.50	4.50		
1.00 GHz	3.90	4.00		
10.0 GHz	3.80	3.90		
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification 0.8 mm	HB	--		IEC 60695-11-10, -20

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min